About Us

Focusing on the fiber optical communications industry, SHIJIA Photonics main business covers optical chips & devices, indoor optical cables & cable assemblies, plating materials for raw cables. The main products include PLC splitter, chip array products, CVD chip series products, DFB laser chip series products, optical cable assemblies, indoor optical cables and cable materials. The company's products are mainly used in telecom, datacom and industrial areas.

Adhering to the “core-based” concept, SHIJIA Photonics maintains the continuous R&D investment in optical chips and devices, and constantly strengthens technological innovation to master the core technology of independent chips. Through years of R&D and industrialization accumulation, having the chip that is the core link of optical communication industry, SHIJIA Photonics has established a whole process IDM business system covering chip design, wafer manufacturing, chip processing, packaging and testing. And it has been applied to the development of various optical chips and broken through a series of key technologies. At the same time, aiming at the diversified and complex development trend of application scenarios in the optical communication industry, SHIJIA Photonics, relying on years of business accumulation in the field of indoor optical cables, continues to integrate the collaborative advantages in “optical fiber connection indoor optical cable-cable material”. Through continuous improvement of the performance indicators of each product link, the overall competitiveness of products is enhanced. Relying on the collaborative development of optical chips and devices, indoor optical cables and cable materials, SHIJIA Photonics' comprehensive strength in the optical communications industry has been steadily improved.
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Our Advantage

- Wafer-level manufacture, with cost and design advantage;
- World-class research and development team;
- Advanced production and testing facilities, skilled employees;
- Full implementation of quality control system.
Certificates

Hunan Shijia Photons Technology Co., Ltd.

Certificate of Registration

ISO 9001:2008
OHSAS 18001:2007

SHIJIA PHOTONS—PLC Product
## PLC Splitter Wafer

Optical splitter wafer is developed by using planar light wave circuit technology. Its different channels are fabricated on the quartz through growing, lithography, etching and other processes. The high reliable optical splitter chips can be obtained through liquid slip bonding, cutting, grinding, and polishing process.

### Features
- 6 inch size
- Low insertion loss and PDL
- Good uniformity
- Widerange operating wavelength

### Applications
- FTTH/FTTB/FTTC/FTCAV Network System
- PON (Passive Optical Network)
- Optical Fiber Equipment & System

### Parameters

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<td>Diameter</td>
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<td>Orientation Flat</td>
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<td>Thickness</td>
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### Operating Wavelength

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<td>S++</td>
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### PDL specification reading is at 1310nm & 1550nm
- F-Channel space 250µm, H-Channel space 127µm
- +S-standard P-premium

## PLC Splitter Chip

PLC splitter chip is one of the key parts of PON system to cover many subscribers for receiving light signals at the same time. In addition, the splitter chip can be operated in reverse direction with combination over one or two optical fiber(s).

### Features
- Low loss and PDL
- Good uniformity, Small size

### Applications
- FTTH/FTTB/FTTC/FTCAV Network System
- PON (Passive Optical Network)
- Optical Fiber Equipment & System, etc.

### Parameters

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### PDL specification reading is at 1310nm & 1550nm
- +S-standard P-premium
PLC Splitter Module

Shijia PLC (Planar Light-Wave Circuit) splitter modules have very high reliability and good optical performance according to GR-1209-CORE or GR-1221-CORE certification. It is the key component of FTTH system for receiving more information to more subscribers through dividing and splitting in N-channel. There are two types of input port, 1x4 or 2xN.

**Features**
- Low insertion loss & PDL
- Excellent Directivity and available
- High channel and high reliability
- Customized ratio available
- Customized Specification available

**Applications**
- FTTH
- FTTO
- FTTC/FTTH Network System
- PON (Passive Optical Network)
- System Optical Fiber Equipment & System, etc.

Compliant with Telcordia GR-1005C & Telcordia GR-1221-CORE

---

**Specification**

**Optical performance Index**

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</table>
**40/48CH AWG Wafer & Chip**

**Description**
Arrayed waveguide Grating (AWG) is a device which can separate or combine signals with different wavelengths. It's capable of multiplexing a large number of wavelengths into a single optical fiber, thereby increasing the transmission capacity of optical networks considerably. AWG offers high wavelength selectivity, low insertion loss, small size. It's commonly used as optical (de)multiplexers in DWDM system, ROADM, wavelength routing.

**Features**
- High channel port
- Low insertion loss
- Low polarization dependent loss
- High isolation
- Accord with Telecordia 1209/1221
- RoHS compliance
- MUX&DMUX

**Optical specifications**

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**4CH AWG Wafer & Chip**

**Features**
- Compact dimension, applies to QSFP28 and CFP4
- High reliability
- Low cost
- Low temperature dependence

**Applications**
- WDM system
- Data center
- 40/160G TOSA/ROSA

**Optical specifications**

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### CWDM and LAN AWG Mux Assembly

**Features**
- Compact Size (Suitable to QSFP28 or CFP4)
- High stability and reliability
- Low Cost
- Mux and Demux functionality
- Qualified under GR-1221-CORE and RoHS compliant

**Applications**
- WDM Network TO/S/ROSA for 40/100Gbps Transceiver
- Datacom
- Telecom

### Optical Specifications

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>UNITS</th>
<th>CWDM</th>
<th>LAN WDM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Channels</td>
<td>Ch</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Channel Spacing</td>
<td>–</td>
<td>20nm</td>
<td>4.5nm</td>
</tr>
<tr>
<td>Center wavelength</td>
<td>nm</td>
<td>1271</td>
<td>1266.68</td>
</tr>
<tr>
<td></td>
<td>nm</td>
<td>1291</td>
<td>1300.05</td>
</tr>
<tr>
<td></td>
<td>nm</td>
<td>1311</td>
<td>1304.50</td>
</tr>
<tr>
<td></td>
<td>nm</td>
<td>1331</td>
<td>1309.14</td>
</tr>
<tr>
<td>Wavelength Accuracy*</td>
<td>nm</td>
<td>±1</td>
<td>±0.3</td>
</tr>
<tr>
<td>1dB Bandwidth*</td>
<td>nm</td>
<td>10</td>
<td>2.8</td>
</tr>
<tr>
<td>Insertion Loss (COM &gt;&gt; Channels)</td>
<td>dB</td>
<td>3.5</td>
<td>4.5</td>
</tr>
<tr>
<td>Insertion Loss Uniformity*</td>
<td>dB</td>
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<td></td>
</tr>
<tr>
<td>Polarization Dependent Loss*</td>
<td>dB</td>
<td>0.5</td>
<td></td>
</tr>
<tr>
<td>Return Loss</td>
<td>dB</td>
<td>30</td>
<td></td>
</tr>
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</table>

### CWDM and LAN AWG Demux Assembly

**Features**
- Compact Size (Suitable to QSFP28 or CFP4)
- High stability and reliability
- Low Cost
- Mux and Demux functionality
- Qualified under GR-1221-CORE and RoHS compliant

**Applications**
- WDM Network TO/S/ROSA for 40/100Gbps Transceiver
- Datacom
- Telecom

### Optical Specifications

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>UNITS</th>
<th>CWDM</th>
<th>LAN WDM</th>
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<tr>
<td>Channels</td>
<td>Ch</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Channel Spacing</td>
<td>–</td>
<td>20nm</td>
<td>4.5nm</td>
</tr>
<tr>
<td>Center wavelength</td>
<td>nm</td>
<td>1271</td>
<td>1266.68</td>
</tr>
<tr>
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<td>nm</td>
<td>1291</td>
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<td></td>
<td>nm</td>
<td>1311</td>
<td>1304.50</td>
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<td>nm</td>
<td>1331</td>
<td>1309.14</td>
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<tr>
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<td>±1</td>
<td>±0.3</td>
</tr>
<tr>
<td>1dB Bandwidth*</td>
<td>nm</td>
<td>10</td>
<td>2.8</td>
</tr>
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<td>Insertion Loss (COM &gt;&gt; Channels)</td>
<td>dB</td>
<td>2.5</td>
<td>2.7</td>
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<tr>
<td>Insertion Loss Uniformity*</td>
<td>dB</td>
<td>1.6</td>
<td></td>
</tr>
<tr>
<td>Polarization Dependent Loss*</td>
<td>dB</td>
<td>0.5</td>
<td></td>
</tr>
<tr>
<td>Adjacent Channel Isolation* (COM &gt;&gt; Channels)</td>
<td>dB</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Return Loss</td>
<td>dB</td>
<td>30</td>
<td></td>
</tr>
</tbody>
</table>
### 100GHz Gaussian and Flat-Top Thermal AWG

**Features**
- Interpolized Temperature Controller
- Low Power Consumption
- MSA-Compliant Option Available
- High stability and reliability
- Low insertion loss, high isolation increase system margin
- Mux and Demux functionality

**Applications**
- DWDM transmission
- Metro Area Networks
- Long Haul Networks
- PON Networks
- Building blocks for ROADM and YMUX

### Optical Specifications

<table>
<thead>
<tr>
<th>No.</th>
<th>PARAMETER</th>
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<th>SPECIFICATION</th>
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<tbody>
<tr>
<td>1</td>
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<td>GHz</td>
<td>Flat-Top, Gaussian</td>
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<td>2</td>
<td>Nominal Channel Spacing</td>
<td>GHz</td>
<td>100</td>
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<td>3</td>
<td>Output Number of Channels</td>
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<td>4</td>
<td>Operating Band</td>
<td>C Band</td>
<td></td>
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<tr>
<td>5</td>
<td>Clear Passband</td>
<td>GHz</td>
<td>&lt; 1.5</td>
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<tr>
<td>6</td>
<td>Wavelength Accuracy</td>
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<td>± 0.5</td>
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<td>7</td>
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<td>nm</td>
<td>&gt; 0.47</td>
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<td>8</td>
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<td>nm</td>
<td>&gt; 0.64</td>
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<td>9</td>
<td>5dB Bandwidth</td>
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<tr>
<td>10</td>
<td>Optical Insertion Loss</td>
<td>dB</td>
<td>&lt; 4.8</td>
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<tr>
<td>11</td>
<td>Insertion Loss Uniformity</td>
<td>dB</td>
<td>&lt; 1.0</td>
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<tr>
<td>12</td>
<td>Ripple</td>
<td>dB</td>
<td>&lt; 0.5</td>
</tr>
<tr>
<td>13</td>
<td>Polarization Dependent Loss</td>
<td>dB</td>
<td>&lt; 0.5</td>
</tr>
<tr>
<td>14</td>
<td>Adjacent Channel Isolation</td>
<td>dB</td>
<td>&lt; 28</td>
</tr>
<tr>
<td>15</td>
<td>Non-adjacent Channel Isolation</td>
<td>dB</td>
<td>&lt; 39</td>
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<tr>
<td>16</td>
<td>Total Crosstalk</td>
<td>dB</td>
<td>&lt; 24</td>
</tr>
<tr>
<td>17</td>
<td>Polarization Mode Dispersion (PMD)**</td>
<td>pm</td>
<td>&lt; 0.5</td>
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<tr>
<td>18</td>
<td>Chromatic Dispersion</td>
<td>ps/nm</td>
<td>± 20</td>
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<tr>
<td>19</td>
<td>Optical Return Loss</td>
<td>dB</td>
<td>&gt; 40</td>
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<td>20</td>
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<td>mm</td>
<td>120×70±11.5</td>
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<tr>
<td>21</td>
<td>Operating Temperature</td>
<td>°C</td>
<td>-5~65</td>
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50GHz Flat-Top Athermal AWG Rack Mount

Features
- Athermal design operates over operating temperature range
- High stability and reliability
- Low insertion loss, high isolation increase system margin
- Mux and Demux functionality
- Qualified under Telcordia 1269/1221 and ROHS compliant

Applications
- DWDM Transmission
- Metro Area Networks
- Long Haul Networks
- FCN Networks
- Building blocks for ROADM and VMUX

Optical specifications

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>UNITS</th>
<th>SPECIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pass Band Profile</td>
<td>GHz</td>
<td>Flat-Top</td>
</tr>
<tr>
<td>Nominal Channel Spacing</td>
<td>GHz</td>
<td>50</td>
</tr>
<tr>
<td>Output Number of Channels</td>
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<tr>
<td>Operating Band</td>
<td></td>
<td>C17~H64</td>
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<tr>
<td>Clear Passband</td>
<td>GHz</td>
<td>±1.25</td>
</tr>
<tr>
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<td>pm</td>
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<tr>
<td>1dB Bandwidth</td>
<td>nm</td>
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</tr>
<tr>
<td>3dB Bandwidth</td>
<td>nm</td>
<td>≥0.36</td>
</tr>
<tr>
<td>20dB Bandwidth</td>
<td>nm</td>
<td>≤1.2</td>
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<tr>
<td>Optical Insertion Loss</td>
<td></td>
<td></td>
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<tr>
<td>Link Port</td>
<td>dB</td>
<td>≤4.6</td>
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<tr>
<td>Monitor Port (MUX)</td>
<td>dB</td>
<td>≤21</td>
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<tr>
<td>Monitor Port (DMUX)</td>
<td>dB</td>
<td>≤17.5</td>
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<tr>
<td>Insertion Loss Uniformity</td>
<td>dB</td>
<td>≤1.2</td>
</tr>
<tr>
<td>Ripple</td>
<td>dB</td>
<td>≤0.6</td>
</tr>
<tr>
<td>Polarization Dependent Loss</td>
<td>dB</td>
<td>≤0.5</td>
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<tr>
<td>Adjacent Channel Isolation</td>
<td>dB</td>
<td>≥25</td>
</tr>
<tr>
<td>Non-adjacent Channel Isolation</td>
<td>dB</td>
<td>≥38</td>
</tr>
<tr>
<td>Total Crosstalk</td>
<td>dB</td>
<td>≥22</td>
</tr>
<tr>
<td>Polarization Mode Dispersion (PMD)</td>
<td>ps/√km</td>
<td>≤0.5</td>
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<tr>
<td>Chromatic Dispersion</td>
<td>ps/km</td>
<td>≥20</td>
</tr>
<tr>
<td>Optical Return Loss</td>
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<td>≥40</td>
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<td>Package Size</td>
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<td>1U Rack Mount</td>
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<td>Fiber Type</td>
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<tr>
<td>Connector Type</td>
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<td>LC/UPC</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>°C</td>
<td>-5~+85 or -40~+85</td>
</tr>
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</table>

CWDM Module

Description
- Henan Shijia Photonics Technology offer CWDM module based on TFF with three port device cascades. Customized design can be carried out by integrating couplers, detectors and other devices. Passed Telcordia GR-1221-CORE.

Features
- 2/4/8/16 channels MUX/DEMUX
- Wide passband
- Low Insertion Loss
- High Channel Isolation
- High stability and reliability
- Epoxy-free on Optical Path

Applications
- CWDM
- LAN
- FTTx

Optical specifications

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>UNITS</th>
<th>SPECIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating wavelength</td>
<td>nm</td>
<td>1260~1620</td>
</tr>
<tr>
<td>Channel Number</td>
<td>/</td>
<td>4 6 8 12</td>
</tr>
<tr>
<td>Insertion Loss</td>
<td>dB</td>
<td>≤1.8 ≤2.1 ≤2.7 ≤3.2</td>
</tr>
<tr>
<td>Center Wavelength</td>
<td>nm</td>
<td>1271,1291,1311,…1691,1611</td>
</tr>
<tr>
<td>Channel Spacing</td>
<td></td>
<td>20</td>
</tr>
<tr>
<td>Channel pass band for CWDM channel</td>
<td>nm</td>
<td>ITU+/-0.5</td>
</tr>
<tr>
<td>Center wavelength deviation</td>
<td>nm</td>
<td>≤1.0</td>
</tr>
<tr>
<td>Channel Ripple</td>
<td>dB</td>
<td>≤0.5</td>
</tr>
<tr>
<td>Adjacent Channel Isolation</td>
<td>dB</td>
<td>≥36</td>
</tr>
<tr>
<td>Non-Adjacent Channel Isolation</td>
<td>dB</td>
<td>≥45</td>
</tr>
<tr>
<td>Insertion Loss Thermal Stability</td>
<td>dB/°C</td>
<td>≤0.007</td>
</tr>
<tr>
<td>Wavelength Thermal Stability</td>
<td>dB/°C</td>
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</tr>
<tr>
<td>Polarization Dependent Loss</td>
<td>dB</td>
<td>≥60</td>
</tr>
<tr>
<td>Return Loss</td>
<td>dB</td>
<td>≥45</td>
</tr>
<tr>
<td>Package Dimension (mm)</td>
<td></td>
<td>130×103×25</td>
</tr>
</tbody>
</table>

Remark: Specified with connectors at room temperature
2.5G 1310nm DFB

**Description**

The laser design is a ridge structure with multi-quantum well (MQW) active layers and distributed-feedback (DFB) grating layer. This high performance and high reliability laser is suitable for GPON and other data communication applications.

**Features**

- Al/GaN/As MQW (Multiple Quantum Well)
- 2.5Gbps 1310nm DFB (Distributed-Feedback) LD (Laser Diode)
- Single mode
- Edge-emitting
- Low threshold current
- High output power
- Narrow beam divergence angle
- Operating temperature: -5°C to 85°C
- RoHS compliant and design for Telcordia-GR468

**Applications**

- Uncooled applications
- PON

---

2.5G 1310nm DFB

**Description**

The laser design is a ridge structure with multi-quantum well (MQW) active layers and distributed-feedback (DFB) grating layer. This high performance and high reliability laser is suitable for GPON and other data communication applications.

**Features**

- Al/GaN/As MQW (Multiple Quantum Well)
- 2.5Gbps 1310nm DFB (Distributed-Feedback) LD (Laser Diode)
- Single mode
- Edge-emitting
- Low threshold current
- High output power
- Narrow beam divergence angle
- Operating temperature: -5°C to 85°C
- RoHS compliant and design for Telcordia-GR468

**Applications**

- Uncooled applications
- PON
**10G CWDM DFB Chip**

**Description**

The laser design is ridge laser structure with multi-quantum well (MQW) active layers and distributed feedback (DFB) grating layer, the direct modulation up to 15GHz.

**Features**

- AlGaAs MQW (Multiple Quantum Well)
- 10G CWDM DFB (Distributed-Feedback) Laser Diode
- Single mode
- Edge-emitting
- Low threshold current
- Operating temperature: -40°C to 85°C
- RoHS compliant and design for Telcordia-GR468
- For 1310nm, 1491nm, 1551nm, 1531nm, 1351nm, 1571nm, 1591nm, 1611nm

**Applications**

- Uncooled applications
- Gigabit Ethernet
- Data Center

---

**10G CWDM TO**

**Features**

- Integrated 10G CWDM DFB LD Chip
- Edge-emitting laser
- Hermetic TO-96 package
- Uncooled operation
- Low threshold current
- Integrated InGaAs monitoring photodiode
- -40°C to 85°C operating temperature
- Qualified as per intent of Telcordia GR-468
- RoHS compliant

**Applications**

- 10 Gigabit Ethernet
- Fiber Channel

---

**High Power 1310nm DFB Chip**

**Description**

The laser design is ridge laser structure with multi-quantum well (MQW) active layers and distributed feedback (DFB) grating layer, the output Power up to 100mW.

**Features**

- AlGaAs MQW (Multiple Quantum Well)
- 1310nm DFB (Distributed-Feedback) Laser Diode
- Single mode
- Edge-emitting
- Low threshold current
- High output power
- RoHS compliant and design for Telcordia-GR468

**Applications**

- Gigabit Ethernet
- CW (Continuous Wave)
- Silicon Photonics
2.5G 1310nm DFB 4PIN TO56

**Features**
- Integrated 2.5G 1310nm DFB LD Chip
- Edge-emitting laser
- Hermetic TO-56 package
- Uncooled operation
- Small divergence angle
- Integrated PIN monitoring photodiode
- -40°C to 85°C operating temperature
- Qualified as per intent of Telcordia GR-468
- RoHS compliant
- Different power can be customized according to customer needs, and different solutions can be used flexibly

**Applications**
- GPON/ Ethernet
- Point-to-point fiber optic links
- Fiber channel

2.5G 1490nm & 1550nm DFB 4PIN TO56

**Features**
- Integrated 2.5G 1490nm & 1550nm DFB LD Chip
- Edge-emitting laser
- Hermetic TO-56 package
- Uncooled operation
- Integrated PIN monitoring photodiode
- -40°C to 85°C operating temperature
- Qualified as per intent of Telcordia GR-468
- RoHS compliant
- Different power can be customized according to customer needs, and different solutions can be used flexibly

**Applications**
- SONET transmitters
- Point-to-point fiber optic links

25Gbps I-Temp LR TOSA

**Introduction**
The SHUJIA's 25Gbps LR TOSA with LC receptacle is designed for 25Gbps data communication performance requirements. This device consists of a 1310nm DFB-LD, a monitor photodiode, a built-in optical isolator in a TO package. And allows this device to operate over a case temperature range of -40°C to +85°C. The TOSA is suitable for use in 25Gbps communication systems.

**Features**
- Up to 10km in standard single-mode fiber at 35.7Gbps
- Operating case temperature range from -40°C to 85°C
- Uncabled 25Gbps DFB Laser transmitter
- Single mode LC receptacle
- Class 1 Laser safety
- RoHS2002/95/EC compliant
- With flexible printed circuit

**Applications**
- Data centers switch interconnect
- High performance computing interconnect
- Server and storage area network interconnect
- Routers and transport interfaces in core networks

**Specification**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbol</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Unit</th>
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<tbody>
<tr>
<td>Threshold Current (ISOL)</td>
<td>Itn</td>
<td>5</td>
<td>15</td>
<td></td>
<td>mA</td>
</tr>
<tr>
<td>Optical Output Power</td>
<td>Pf</td>
<td>-1</td>
<td>0</td>
<td>2.0</td>
<td>dBm</td>
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<tr>
<td>Center Wavelength</td>
<td>Ao</td>
<td>1300</td>
<td>1210</td>
<td>1320</td>
<td>nm</td>
</tr>
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<td>Spectral Width</td>
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<td>-</td>
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<td>nm</td>
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<td>dB</td>
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<td>-</td>
<td>1500</td>
<td>μA</td>
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<td>Id</td>
<td>-</td>
<td>-</td>
<td>100</td>
<td>nA</td>
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<td>Vop</td>
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<td>1.6</td>
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<td>V</td>
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<td>ISO</td>
<td>25</td>
<td>-</td>
<td>-</td>
<td>dB</td>
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</table>
25Gbps EML TOSA

Introduction
The SHUJA’s 25Gbps EML TOSA is designed for 25Gbps data communication requirements. This device consists of a 1310nm EA modulator integrated DFB-LD, a monitor photodiode, a built-in optical isolator and a thermo-electric cooler in a TO package. An incorporated thermo-electric cooler keeps the laser chip at a well-controlled temperature. This allows the device to operate over a case temperature range of 0°C to 70°C. The TOSA is suitable for use in 25Gbps communication systems.

Features
Up to 20km in standard single mode fiber at 25.78Gbps
Operating case temperature range from 0°C to 70°C
1310nm cooled EML transmitter with TEC
+20dBm minimum output power
Single mode LC receptacle
RoHS (2002/95/EC) compliant
With flexible printed circuit

Applications
Data centers switch interconnect
High performance computing interconnect
Server and storage area network interconnect
Routers and transport interfaces in core networks

Specification

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbol</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Unit</th>
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<td>45</td>
<td>55</td>
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<td>Threshold Current (Ith)</td>
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<td>–</td>
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<td>mA</td>
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<td>Laser Operating Current</td>
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<td>110</td>
<td>mA</td>
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<td>Po</td>
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<td>–</td>
<td>–</td>
<td>dBm</td>
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<td>Center Wavelength</td>
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<td>nm</td>
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<td></td>
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<td>nm</td>
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<td>–</td>
<td>dB</td>
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<tr>
<td>EADC Voltage</td>
<td>Vea</td>
<td>–2</td>
<td>–</td>
<td>0</td>
<td>V</td>
</tr>
<tr>
<td>P-P Modulation voltage</td>
<td>Vpp</td>
<td>–</td>
<td>1.6</td>
<td>2</td>
<td>V</td>
</tr>
<tr>
<td>Monitor PD Current</td>
<td>Im</td>
<td>100</td>
<td>–</td>
<td>1030</td>
<td>μA</td>
</tr>
<tr>
<td>Dark current (PD)</td>
<td>Id</td>
<td>–</td>
<td>–</td>
<td>100</td>
<td>nA</td>
</tr>
<tr>
<td>Relative intensity noise</td>
<td>RIN</td>
<td>–</td>
<td>–</td>
<td>-130</td>
<td>dB/Hz</td>
</tr>
<tr>
<td>Optical Isolation</td>
<td>ISO</td>
<td>25</td>
<td>–</td>
<td>–</td>
<td>dB</td>
</tr>
<tr>
<td>Thermistor Resistance</td>
<td>R</td>
<td>10</td>
<td>–</td>
<td>10 K</td>
<td>ohm</td>
</tr>
<tr>
<td>TEC Voltage</td>
<td>V</td>
<td>2.0</td>
<td>–</td>
<td>–</td>
<td>V</td>
</tr>
<tr>
<td>TEC Current</td>
<td>I</td>
<td>1.0</td>
<td>–</td>
<td>–</td>
<td>A</td>
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</table>

4x25Gb/s LR4 TOSA

Introduction
SHUJA’s TSFLW01E0001 is a 4-channel direct modulation DFB laser module, 1290.50nm-1300.05nm, 1304.05nm and 1309.14nm DFB laser chips are coupled to an optical wavelength multiplexer (MUX), a LC receptacle for optical connection and a flex printed circuits (FPCs) as electrical interface. It is a planar low-profile package in very compact dimension. This product is RoHS compliant design, suitable for low power consumption 100Gbit/s LR4 QSFP28 (CFP2/CFP4) transceiver and up to 10km transmission.

Features
LC receptacle Compliant XMD MSA
Compliance with LR4 spec
Support data rate up to 28G(NRZ)
Compliance with ITU-T and IEEE 56-ohm differential impedance
Driver outside
RoHS (2002/95/EC) compliant
Operation Temperature: -40°C to +85°C

Applications
QSFP Transceiver and Receiver
CFP/CFP2/CFP4 Transceiver Receiver
Other

Specification

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbol</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Unit</th>
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<tbody>
<tr>
<td>Operation Case Temperature</td>
<td>°C</td>
<td>-20</td>
<td>25</td>
<td>85</td>
<td>°C</td>
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<tr>
<td>Data Rate per Lane</td>
<td>DR</td>
<td>30</td>
<td>100</td>
<td>160</td>
<td>Gb/s</td>
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<td>Lane Wavelengths (range)</td>
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<td>1294.50-1296.50</td>
<td>1296.00-1301.00</td>
<td>1303.00-1305.63</td>
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<td>Average launch power, each lane</td>
<td>Po</td>
<td>-3</td>
<td>+2.5</td>
<td>dBm</td>
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</tr>
<tr>
<td>Optical Modulation Amplitude</td>
<td>OMA</td>
<td>-4</td>
<td>+2.5</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>Slope Efficiency</td>
<td>SE</td>
<td>0.25</td>
<td></td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>OML Bias Current</td>
<td>I</td>
<td>30</td>
<td>80</td>
<td>mA</td>
<td></td>
</tr>
<tr>
<td>Side-Mode Suppression Ratio</td>
<td>SSMR</td>
<td>30</td>
<td></td>
<td>dB</td>
<td></td>
</tr>
<tr>
<td>Tracking Error</td>
<td>TE</td>
<td>-1.5</td>
<td>+1.5</td>
<td>dB</td>
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</tr>
<tr>
<td>Dispersion Penalty, Each Lane(max)</td>
<td>Dp</td>
<td>3.0</td>
<td></td>
<td>dB</td>
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</tr>
<tr>
<td>Thermistor Resistance</td>
<td>R</td>
<td>10</td>
<td>10 K</td>
<td>ohm</td>
<td></td>
</tr>
<tr>
<td>TEC Voltage</td>
<td>V</td>
<td>2.5</td>
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<td>V</td>
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</tr>
<tr>
<td>TEC Current</td>
<td>I</td>
<td>1.0</td>
<td></td>
<td>A</td>
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</tr>
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</table>
4x25Gb/s CWDM4/CLR4 TOSA

Introduction

SHUJIA's T5525WDL1EDT01 is a 4 channel direct modulation DFB laser module, 1270nm, 1290nm, 1310nm, and 1330nm. DFB laser chips are coupled to an optical wavelength multiplexer (MUX), a LC receptacle for optical connection and a flex printed circuits (FPCs) as electrical interface. It is a planar low-profile package in very compact dimension. This product is RoHS compliant design, suitable for low power consumption 10GB/s CWDM4/CLR4 QSFP28 transceiver and up to 10km transmission.

Features

- LC receptacle
- Compliant XMD MSA
- Compliance with CWDM4/CLR4 spec
- Support data rate up to 26G(NRZ)
- Compliance with ITU-T and IEEE
- 50-ohm differential impedance
- Driver outside
- RoHS (2002/95/EC) compliant
- Operation Temperature: C/E Temp
- Compact size: 35.3X6.3X3.6 mm (LWH)

Applications

- QSFP Transceiver and Receiver
- CFP/CFP2 Transceiver Receiver
- Other

Specification

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbol</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Rate per Lane</td>
<td>DR</td>
<td>25.78/25 ± 100 ppm</td>
<td>Gbps</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lane Wavelengths (range)</td>
<td>A</td>
<td>1264.5 - 1277.5</td>
<td>nm</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1284.5 - 1297.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
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<td>1304.5 - 1317.5</td>
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<td></td>
<td>1324.5 - 1337.5</td>
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</tr>
<tr>
<td>Average launch power, each lane</td>
<td>Po</td>
<td>-3</td>
<td>+2.5 dBm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Optical Modulation Amplitude</td>
<td>OMA</td>
<td>-4</td>
<td>+2.5 dBm</td>
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<td></td>
</tr>
<tr>
<td>Slope Efficiency</td>
<td>SE</td>
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<td>DML Bias Current</td>
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<td>30</td>
<td>mA</td>
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<td></td>
</tr>
<tr>
<td>Side Mode Suppression Ratio</td>
<td>SMR</td>
<td>30</td>
<td>dB</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tracking Error</td>
<td>TE</td>
<td>-1.5</td>
<td>dB</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dispersion Penalty, Each Lane(max)</td>
<td>Dp</td>
<td>3.0</td>
<td>dB</td>
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<td></td>
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4x25Gb/s CWDM4/CLR4 ROSA

Introduction

SHUJIA's 4x25Gb/s CWDM4/CLR4 ROSA was packaged with four PIN photodetectors (PD) and a quad transimpedance amplifier (TIA) in a non-hermetic and low-profile package. One 4-channel optical PLC CWDM de-MUX was aligned to the PDs. The optical connection of the ROSA package was via a standard LC receptacle. The package's electric IO was via flexible printed circuits (FPC). The ROSA packages are very compact and suitable for building CWDM4/CLR4 QSF28 modules for optical signal transmission up to 2km in single mode fibers (SMF).

Features

- Supports 103.1Gb/s aggregate bit rate
- 4-channel PIN photodetectors
- 3.3V power supply
- Low power dissipation
- Transmission length up to 2km on Single Mode Fiber (SMF)
- Commercial case temperature range of -20°C to 85°C
- LC receptacle connection
- RoHS-6 compliant

Applications

- Data center switch interconnect
- High performance computing interconnect
- Server and storage area network interconnect
- Routers and transport interfaces in core networks

Specification

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbol</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Rate per Lane</td>
<td>DR</td>
<td>25.78/25 ± 100 ppm</td>
<td>Gbps</td>
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</tr>
<tr>
<td>Lane Wavelengths (range)</td>
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<td>nm</td>
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<tr>
<td></td>
<td></td>
<td>1284.5 - 1297.5</td>
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<tr>
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<td></td>
<td>1324.5 - 1337.5</td>
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<tr>
<td>Receive Power (OMA) per Lane</td>
<td>RXOMA</td>
<td>&gt;2.5 dBm</td>
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<td></td>
</tr>
<tr>
<td>Receive Power per Lane</td>
<td>RX</td>
<td>-10.6</td>
<td>+2.5 dBm</td>
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<td>Receiver Sensitivity (OMA) per Lane (6x16 ‰ BER)</td>
<td>RXebb</td>
<td>-11 dBm</td>
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<td>Return Loss</td>
<td>RL</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Stressed Receiver Sensitivity (OMA) per Lane</td>
<td>SRS</td>
<td>-7.3 dBm</td>
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</tr>
</tbody>
</table>
4x25Gb/s LR4 ROSA

Introduction
SHIJIA's 4x25Gb/s LR4 ROSA was packaged with four PIN photodetectors (PD) and a quad transimpedance amplifier (TIA) in a non-hermetic and low-profile package. One 4-channel optical PLC Lan-WDM de-MUX was aligned to the PDs. The optical connection of the ROSA package was via a standard LC receptacle. The package's electric I/O was via flexible printed circuits (FPC). The ROSA packages are very compact and suitable for building LR4 QSFP28/GFP28/GFP4 modules for optical signal transmission up to 10km in single mode fibers (SMF).

Features
- Supports 10.31Gb/s aggregate bit rate
- 4-channel PIN photodetectors
- 3.3V power supply
- Low power dissipation
- Transmission length up to 10km on Single Mode Fiber (SMF)
- Commercial case temperature range of 0°C to 70°C
- LC receptacle connection
- RoHS-6 compliant

Applications
- Data centers switch interconnect
- High performance computing interconnect
- Server and storage area network interconnect
- Routers and transport interfaces in core networks

Specification

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbol</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Unit</th>
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<td>Gbps</td>
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<td>nm</td>
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<td>Receiver Power (ODM) per Lane</td>
<td>PRX0MA</td>
<td>&gt;2.5dBm</td>
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<td>Receiver Power per Lane</td>
<td>PRX</td>
<td>&gt;2.5dBm</td>
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<td>Receiver Sensitivity (ODM) per Lane (1x10^-3 BER)</td>
<td>PRXom</td>
<td>-8.5dBm</td>
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<tr>
<td>Receiver Return Loss</td>
<td>RL</td>
<td>-28dB</td>
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<tr>
<td>Stressed Receiver Sensitivity (ODM) per Lane</td>
<td>SRS</td>
<td>-7.3dBm</td>
<td></td>
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</tbody>
</table>

25Gbps LR PIN ROSA

Introduction
The SHIJIA's 25Gbps LR PIN ROSA (Receiver Optical Sub-Assembly) with LC Receptacle is designed for 25Gbps data communication performance requirements. This device integrates with a 25G high speed PIN detector and a trans-impedance amplifier (TIA) into a TO-46 header with cap window. The ROSA is 5 pins with Receptacle package to receive light through the PIN detector with high coupling efficiency.

Features
- Data rates up to 25Gbps
- Single 3.3V Power Supply
- Operating case temperature range from -40°C to 85°C
- Differential 1000 Output
- Received signal strength indicator (RSSI)
- Single-mode LC Receptacle, Crown Package
- With flexible printed circuit
- RoHS (2002/95/EC) compliant

Applications
- Data centers switch interconnect
- High performance computing interconnect
- Server and storage area network interconnect
- Routers and transport interfaces in core networks

Specification

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbol</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Unit</th>
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<tr>
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<td>Supply Voltage</td>
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<td>3.07V</td>
<td>3.35V</td>
<td>3.47V</td>
<td>V</td>
</tr>
<tr>
<td>Supply Current</td>
<td>Ioc</td>
<td>15mA</td>
<td>32mA</td>
<td></td>
<td>mA</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>S</td>
<td>0.4dBm</td>
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<td></td>
<td></td>
</tr>
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<td>Saturation Power</td>
<td>Psat</td>
<td>0dBm</td>
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<td>Bandwidth (3dB)</td>
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<td></td>
<td>GHz</td>
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<td>6.5Ω</td>
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<td>LF</td>
<td>19kHz</td>
<td></td>
<td></td>
<td>KHz</td>
</tr>
<tr>
<td>Optical Return Loss</td>
<td>RL</td>
<td>-20dB</td>
<td></td>
<td></td>
<td>dB</td>
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<tr>
<td>Differential Output Impedance</td>
<td>Rf</td>
<td>100Ω</td>
<td></td>
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<td>Ω</td>
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<td>RSSI Accuracy</td>
<td>-</td>
<td>z2</td>
<td></td>
<td></td>
<td>%</td>
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</table>
4x25Gb/s PSM4 ROSA

Introduction
SHUJA’s PSM4 ROSA is a 4x25Gb/s receive optical sub-assembly. Four high performance, high reliability PIN photodiodes and a quad transimpedance amplifier (TIA) are packaged in a RON-hermetic, low profile package. Four incoming lights are connected to the PINs via SMF pigtailed or pluggable MT connector individually. The package’s electric I/O is via flexible printed circuit (FPC). The ROSA is very compact and suitable for building 100GbE BASE 500m PSM4 transceiver modules.

Features
- Supports 103.1 Gb/s aggregate bit rate
- 4-channel PIN photodiodes
- 3.3V power supply
- Low power dissipation
- Transmission length up to 500m on Single Mode Fiber (SMF)
- Operating case temperature range of 0°C to 70°C
- LC or MT connection
- RoHS-compliant

Applications
- Data centers switch interconnect
- High performance computing interconnect
- Server and storage area network interconnect
- Routers and transport interfaces in core networks

Specification

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbol</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Rate per Lane</td>
<td>DR</td>
<td>25.78125 ± 100 ppm</td>
<td>Gb/s</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lane Wavelength (range)</td>
<td>λ</td>
<td>1295</td>
<td>1335</td>
<td>nm</td>
<td></td>
</tr>
<tr>
<td>Receive Power (OMA) per Lane</td>
<td>PRxOMA</td>
<td>&gt;2.5</td>
<td>dBm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average Receive Power per Lane</td>
<td>PRX</td>
<td>&gt;2.5</td>
<td>dBm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Receiver Sensitivity (OMA) per Lane (1x10^-9 BER)</td>
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<td>dBm</td>
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<td></td>
</tr>
<tr>
<td>Return Loss</td>
<td>RL</td>
<td>-20</td>
<td>dB</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stressed Receiver Sensitivity (OMA) per Lane</td>
<td>SRS</td>
<td>-7.3</td>
<td>dBm</td>
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</tr>
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</table>

4x25Gb/s PSM4 TOSA

Introduction
SHUJA’s 4x25G PSM4 TOSA is integrated with a quad DML Driver with I2C Serial Interface, four of 1310nm DFB laser chips coupled to four parallel single mode fibers for optical connection and two flex printed circuits (FPCs) as electrical interface. It is a planar low-profile package in very compact dimension. It is intended for use in PSM4 ADC cables and PSM4 QSFP28 modules for single mode fiber transmission up to 500m distance.

Features
- Supports 103.1 Gb/s aggregate bit rate
- 4-channel DML LDs
- 3.3V power supply
- Low power dissipation
- I2C Serial Interface
- Transmission length up to 500m on Single Mode Fiber (SMF)
- Operating case temperature range of 0°C to 70°C
- LC or MT connection
- RoHS-compliant

Applications
- Data centers switch interconnect
- High performance computing interconnect
- Server and storage area network interconnect
- Routers and transport interfaces in core networks

Specification

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbol</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Unit</th>
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<tbody>
<tr>
<td>Data Rate per Lane</td>
<td>DR</td>
<td>25.78125 ± 100 ppm</td>
<td>Gb/s</td>
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<tr>
<td>Lane Wavelength (range)</td>
<td>λ</td>
<td>1295</td>
<td>1335</td>
<td>nm</td>
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</tr>
<tr>
<td>Optical Modulation Amplitude</td>
<td>OMA</td>
<td>-</td>
<td>2.2</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>Side-Mode Suppression Ratio</td>
<td>SPSH</td>
<td>30</td>
<td></td>
<td>dB</td>
<td></td>
</tr>
<tr>
<td>Supply Voltage</td>
<td>VR</td>
<td>3.130</td>
<td>3.3</td>
<td>3.485</td>
<td>V</td>
</tr>
<tr>
<td>Supply Current</td>
<td>Ic</td>
<td>-</td>
<td>400</td>
<td>mA</td>
<td></td>
</tr>
<tr>
<td>DNL Bias Current</td>
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<td>-</td>
<td>80</td>
<td>mA</td>
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</tr>
<tr>
<td>Extinction Ratio</td>
<td>ER</td>
<td>3.5</td>
<td>-</td>
<td>dB</td>
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</tr>
<tr>
<td>Differential Input Voltage</td>
<td>p-e</td>
<td>200</td>
<td>800</td>
<td>mVpp</td>
<td></td>
</tr>
<tr>
<td>Eye Mask Margin</td>
<td>MM</td>
<td>5</td>
<td>-</td>
<td>%</td>
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</tr>
<tr>
<td>Monitor Bias Voltage</td>
<td>Vm</td>
<td>2</td>
<td>-</td>
<td>V</td>
<td></td>
</tr>
<tr>
<td>Transmitter Reflectance</td>
<td>Itr</td>
<td>-</td>
<td>-12</td>
<td>dB</td>
<td></td>
</tr>
<tr>
<td>Total Power Dissipation</td>
<td>Poles</td>
<td>-</td>
<td>1.4</td>
<td>W</td>
<td></td>
</tr>
</tbody>
</table>

1. 25.78125Gbps, PRBS31
2. 5E-5 bit error rate, eye mask test over 508 waveforms, measured with Keysight N1022
Optical Fiber Ribbon

Applications
Used as the basic element of optical-fiber-ribbon indoor cable; directly used in optical connections of equipments and apparatus in some special environment.

Features
Good mechanical and environmental characteristics; the stropability characteristics of each fiber meet the relevant standards or customer requirements; the twist characteristics of fiber ribbon meet the relevant standards and customer requirements;

The characteristics of single-mode and multi-mode fiber used in fiber ribbon meet the requirements of relevant international and national standards;

Full chromogram is adopted. The color meets the requirements in GB 6995.2, and takes turns as following: blue, orange, green, brown, gray, white, red, black, yellow, violet, pink, turquoise, or other contracted color;

Meet various requirements of market and clients.

Dimensional Specifications of Optical Ribbon

<table>
<thead>
<tr>
<th>Fiber Count</th>
<th>Width (mm)</th>
<th>Thickness (mm)</th>
<th>Horizontal Space Between Adjacent Fibers (mm)</th>
<th>Horizontal Space Between End Fibers (mm)</th>
<th>Planarity (μm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>≤0.700</td>
<td>≤0.400</td>
<td>≤0.280</td>
<td>≤0.280</td>
<td>≤35</td>
</tr>
<tr>
<td>4</td>
<td>≤1.220</td>
<td>≤0.400</td>
<td>≤0.280</td>
<td>≤0.280</td>
<td>≤35</td>
</tr>
<tr>
<td>6</td>
<td>≤1.770</td>
<td>≤0.400</td>
<td>≤0.280</td>
<td>≤1.385</td>
<td>≤35</td>
</tr>
<tr>
<td>8</td>
<td>≤2.360</td>
<td>≤0.400</td>
<td>≤0.280</td>
<td>≤1.620</td>
<td>≤35</td>
</tr>
<tr>
<td>10</td>
<td>≤2.850</td>
<td>≤0.400</td>
<td>≤0.280</td>
<td>≤2.450</td>
<td>≤35</td>
</tr>
<tr>
<td>12</td>
<td>≤3.400</td>
<td>≤0.400</td>
<td>≤0.280</td>
<td>≤2.650</td>
<td>≤35</td>
</tr>
</tbody>
</table>

Note: All the values in the table, which are for reference only, are subject to change without notice.

Options
Fiber Type: 0655, 0656 or 0657 single-mode fiber; A1a or A1b multimode fiber; or other types of fiber;
Fiber Count: Total number of fiber in the ribbon;
Delivery Length: 1km or 2km, or other contracted length;
Other Requirements: Other contracted individual requirements.
### Simplex Round Indoor Cable

#### Profile View

- Tight-buffered Fiber
- Aramid Yarn
- Jacket

#### Applications
- Used in pigtailed and patch cords;
- Used in optical connections in optical communication equipment rooms and optical distribution frames;
- Used in optical connections in optical apparatus and equipments.

#### Features
- Good mechanical and environmental characteristics;
- Flame retardant characteristics meets the requirements of relevant standards;
- Soft, flexible, easy to splice, and with big capacity data transmission;
- Meet various requirements of market and clients.

#### Cable Parameters

<table>
<thead>
<tr>
<th>Fiber Count</th>
<th>Cable Dimension</th>
<th>Cable Weight</th>
<th>Tension (N)</th>
<th>Crush (N/100mm)</th>
<th>Min. Bend Radius (mm)</th>
<th>Range of Temperature (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1.6</td>
<td>2.2</td>
<td>40</td>
<td>80</td>
<td>100</td>
<td>50</td>
</tr>
<tr>
<td>2</td>
<td>1.0</td>
<td>3.0</td>
<td>40</td>
<td>80</td>
<td>100</td>
<td>50</td>
</tr>
<tr>
<td>3</td>
<td>3.6</td>
<td>2.0</td>
<td>60</td>
<td>100</td>
<td>100</td>
<td>50</td>
</tr>
<tr>
<td>4</td>
<td>2.4</td>
<td>4.0</td>
<td>60</td>
<td>100</td>
<td>100</td>
<td>50</td>
</tr>
<tr>
<td>5</td>
<td>2.0</td>
<td>6.5</td>
<td>90</td>
<td>150</td>
<td>100</td>
<td>60</td>
</tr>
<tr>
<td>6</td>
<td>2.9</td>
<td>7.4</td>
<td>80</td>
<td>150</td>
<td>100</td>
<td>60</td>
</tr>
</tbody>
</table>

Note: 1. All the values in the table, which are for reference only, are subject to change without notice;
2. The minimum bend radius (static) is 15mm when G.657 fiber is used.

### Duplex Flat Indoor Cable

#### Profile View

- Tight-buffered Fiber
- Aramid Yarn
- Jacket

#### Applications
- Used in pigtailed and patch cords;
- Used in optical connections in optical communication equipment rooms and optical distribution frames;
- Used in optical apparatus and equipments.

#### Features
- Good mechanical and environmental characteristics;
- Flame retardant characteristics meets the requirements of relevant standards;
- The mechanical characteristics meet the requirements of relevant standards;
- Soft, flexible, easy to splice, and with big capacity data transmission;
- Meet various requirements of market and clients.

#### Cable Parameters

<table>
<thead>
<tr>
<th>Fiber Count</th>
<th>Cable Dimension</th>
<th>Cable Weight</th>
<th>Tension (N)</th>
<th>Crush (N/100mm)</th>
<th>Min. Bend Radius (mm)</th>
<th>Range of Temperature (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1.0</td>
<td>3.0</td>
<td>60</td>
<td>120</td>
<td>200</td>
<td>50</td>
</tr>
<tr>
<td>2</td>
<td>1.3</td>
<td>3.7</td>
<td>60</td>
<td>120</td>
<td>200</td>
<td>50</td>
</tr>
<tr>
<td>3</td>
<td>2.0</td>
<td>4.1</td>
<td>7.2</td>
<td>150</td>
<td>200</td>
<td>50</td>
</tr>
<tr>
<td>4</td>
<td>2.4</td>
<td>4.9</td>
<td>10.0</td>
<td>150</td>
<td>200</td>
<td>50</td>
</tr>
<tr>
<td>5</td>
<td>2.3</td>
<td>5.7</td>
<td>13.0</td>
<td>220</td>
<td>220</td>
<td>50</td>
</tr>
<tr>
<td>6</td>
<td>3.2</td>
<td>6.1</td>
<td>14.8</td>
<td>220</td>
<td>220</td>
<td>50</td>
</tr>
</tbody>
</table>

Note: 1. All the values in the table, which are for reference only, are subject to change without notice;
2. The minimum bend radius (static) is 15mm when G.657 fiber is used.

Additional details include:
- Fiber Type: G.652, G.655, or G.657 single-mode fiber; A1a or A2a multimode fiber, or other types of fiber;
- Jacket Material: Environmental flame-retardant polyvinyl chloride (PVC), environmental low smoke zero halogen flame retardant polyethylene (LSZH), environmental thermoplastic polyurethane (TPU), or other contracted material;
- Jacket Color: (including color of fiber) meets the requirements of relevant standards, or other contracted color;
- Cable Dimension: The nominal cable dimension, or other contracted dimension;
- Other Requirements: Other contracted special requests.
**Duplex Flat Indoor Cable II**

**Applications**
- Used in indoor cabling, especially in poor laying conditions.
- Used in optical connections in optical communication equipment rooms and optical distribution frames.
- Used in pigtails and patch cords.

**Features**
- Good mechanical and environmental characteristics.
- Fire retardant characteristics meet the requirements of relevant standards.
- Soft, flexible, easy to splice, and with high capacity data transmission.
- Meet various requirements of market and customers.

<table>
<thead>
<tr>
<th>Cable Parameters</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fiber Count</strong></td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
</tbody>
</table>

Note: 1. All the values in the table, which are for reference only, are subject to change without notice.
2. The minimum bend radius (static) is 15mm when G.657 fiber is used.
3. D is outer diameter of the round cable.
4. The minimum bend radius (static) is 50 when G.657 fiber is used.

**Options**
- Fiber Type: G652, G655 or G657 single-mode fiber, A1a or A1b multimode fiber, or other types of fiber.
- Jacket Material: Environmental flame-retardant polyvinyl chloride (PVC), environmental low smoke zero halogen flame retardant polyolefin (LSZH), or other contracted material.
- Cable Dimension: The nominal cable dimension, or other contracted dimension.
- Delivery Length: 1km or 2km, or other contracted length.
- Other Requirements: Other contracted special requests.

**Multi-fiber Distribution Indoor Cable I**

**Applications**
- Used in indoor cabling, especially used as distribution cable.
- Used as interconnect lines of equipments, and used in optical connections in optical communication equipment rooms and distribution frames.
- Used in pigtails and patch cords.

**Features**
- Good mechanical and environmental characteristics.
- Flame retardant characteristics meet the requirements of relevant standards.
- Soft, flexible, easy to splice, and with high capacity data transmission.
- Meet various requirements of market and clients.

<table>
<thead>
<tr>
<th>Fiber Count</th>
<th>Cable Dimension (mm)</th>
<th>Cable Weight (kg/km)</th>
<th>Tensile (N)</th>
<th>Crush (kN/100mm)</th>
<th>Min. Bend Radius (mm)</th>
<th>Range of Temperature (°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>5.0</td>
<td>19.0</td>
<td>200</td>
<td>400</td>
<td>200</td>
<td>1000</td>
</tr>
<tr>
<td>8</td>
<td>5.2</td>
<td>23.0</td>
<td>200</td>
<td>400</td>
<td>200</td>
<td>1000</td>
</tr>
<tr>
<td>12</td>
<td>6.0</td>
<td>26.0</td>
<td>200</td>
<td>400</td>
<td>200</td>
<td>1000</td>
</tr>
<tr>
<td>16</td>
<td>7.5</td>
<td>44.5</td>
<td>400</td>
<td>600</td>
<td>400</td>
<td>1000</td>
</tr>
<tr>
<td>24</td>
<td>8.2</td>
<td>54.5</td>
<td>400</td>
<td>600</td>
<td>400</td>
<td>1000</td>
</tr>
</tbody>
</table>

Note: 1. All the values provided in the table, which are for reference only, are subject to change without notice.
2. The cable dimension and weight area in accordance with tight-buffered fiber of 0.8mm outer diameter.
3. D is outer diameter of the round cable.
4. The minimum bend radius (static) is 50 when G.657 fiber is used.

**Options**
- Fiber Type: G652, G655 or G657 single-mode fiber, A1a or A1b multimode fiber, or other types of fiber.
- Fiber Count: Total number of fibers in the cable.
- Jacket Material: Environmental flame-retardant polyvinyl chloride (PVC), environmental low smoke zero halogen flame retardant polyolefin (LSZH), environmental thermoplastic polyurethane (TPU), or other contracted material.
- Cable Dimension: The nominal diameter, or other contracted.
- Delivery Length: 1km or 2km, or other contracted length.
- Other Requirements: Other contracted special requests.
**Multi-fiber Distribution Indoor Cable II**

**Applications**
Used in indoor cabling, especially used as distribution cable.

**Features**
- Used for mechanical and environmental characteristics;
- Compliant with the requirements of relevant standards;
- Soft, flexible, easy to splice, and with high capacity data transmission;
- Meet various requirements of market and clients.

**Cable Parameters**

<table>
<thead>
<tr>
<th>Fiber Count</th>
<th>Cable Dimension (mm)</th>
<th>Cable Weight (g)</th>
<th>Tensile(N)</th>
<th>Crush (N/10cm)</th>
<th>Min. Bend Radius (mm)</th>
<th>Range of Temperature (°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>4</td>
<td>12.5</td>
<td>123</td>
<td>400</td>
<td>360</td>
<td>1000</td>
</tr>
<tr>
<td>24</td>
<td>4</td>
<td>15.0</td>
<td>183</td>
<td>400</td>
<td>360</td>
<td>1000</td>
</tr>
<tr>
<td>36</td>
<td>4</td>
<td>17.0</td>
<td>238</td>
<td>600</td>
<td>360</td>
<td>1000</td>
</tr>
<tr>
<td>48</td>
<td>6</td>
<td>19.5</td>
<td>292</td>
<td>600</td>
<td>360</td>
<td>1000</td>
</tr>
<tr>
<td>6</td>
<td>6</td>
<td>9.5</td>
<td>60</td>
<td>250</td>
<td>300</td>
<td>1000</td>
</tr>
<tr>
<td>8</td>
<td>9.5</td>
<td>9.5</td>
<td>91</td>
<td>250</td>
<td>300</td>
<td>1000</td>
</tr>
<tr>
<td>12</td>
<td>12.5</td>
<td>12.5</td>
<td>145</td>
<td>450</td>
<td>300</td>
<td>1000</td>
</tr>
</tbody>
</table>

**Options**
- Fiber Type: G652, G655 or G657 single-mode fiber, A1 or A1b multimode fiber, or other types of fiber;
- Fiber Count: Total number of fibers in the cable;
- Jacket Material: Environmental flame-retardant polyvinyl chloride (PVC), environmental low smoke zero halogen flame retardant polyethylene (LDPE), environmental thermostatic polyethylene (TFE), or other contracted material;
- Jacket Color: (Including color of fiber) meets the requirements of relevant standards, or other contracted color;
- Cable Dimension: The nominal diameter, or other contracted;
- Delivery Length: 1km or 2km, or other contracted length;
- Other Requirements: Other contracted special requirements.

---

**Multi-fiber Breakout Indoor Cable I**

**Applications**
- Used in indoor cabling, especially used as breakout cable;
- Used as access building cable;
- Used as interconnect of equipment in optical communication equipment rooms and distribution frames;
- Used in pigtails and patch cords.

**Features**
- Excellent mechanical and environmental characteristics;
- Flame retardant characteristics meet the requirements of relevant standards;
- The mechanical characteristics meet the requirements of relevant standards;
- Soft, flexible, easy to splice, and with high capacity data transmission;
- Meet various requirements of market and clients.

**Cable Parameters**

<table>
<thead>
<tr>
<th>Fiber Count</th>
<th>Cable Dimension (mm)</th>
<th>Cable Weight (g)</th>
<th>Tensile(N)</th>
<th>Crush (N/10cm)</th>
<th>Min. Bend Radius (mm)</th>
<th>Range of Temperature (°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>7.5</td>
<td>45</td>
<td>200</td>
<td>400</td>
<td>300</td>
<td>1000</td>
</tr>
<tr>
<td>6</td>
<td>9.5</td>
<td>60</td>
<td>250</td>
<td>500</td>
<td>300</td>
<td>1000</td>
</tr>
<tr>
<td>8</td>
<td>10.0</td>
<td>91</td>
<td>91</td>
<td>250</td>
<td>300</td>
<td>1000</td>
</tr>
<tr>
<td>12</td>
<td>12.5</td>
<td>145</td>
<td>145</td>
<td>450</td>
<td>300</td>
<td>1000</td>
</tr>
</tbody>
</table>

**Options**
- Fiber Type: G652, G655 or G657 single-mode fiber, A1 or A1b multimode fiber, or other types of fiber;
- Fiber Count: Total number of fibers in the cable;
- Jacket Material: Environmental flame-retardant polyvinyl chloride (PVC), environmental low smoke zero halogen flame retardant polyethylene (LDPE), environmental thermostatic polyethylene (TFE), or other contracted material;
- Jacket Color: (Including color of fiber) meets the requirements of relevant standards, or other contracted color;
- Cable Dimension: The nominal diameter, or other contracted;
- Delivery Length: 1km or 2km, or other contracted length;
- Other Requirements: Other contracted special requirements.
**Muti-fiber Breakout Indoor Cable II**

- **Applications**
  - Used in indoor cabling, especially as breakout cable.
  - Used as access building cable.
  - Used as interconnect line of equipments, and used in optical connections in optical communication equipment rooms and distribution frames.
  - Used in pigtails and patch cords.

- **Features**
  - Good mechanical and environmental characteristics.
  - Flame retardant characteristics meet the requirements of relevant standards.
  - The mechanical characteristics of jacket meet the requirements of relevant standards.
  - Soft, flexible, easy to lay and splice, and with big capacity data transmission.
  - Meet various requirements of market and clients.

- **Cable Parameters**

<table>
<thead>
<tr>
<th>Fiber Count</th>
<th>Cable Diameter (mm)</th>
<th>Cable Weight (kg/km)</th>
<th>Tensile (N)</th>
<th>Crush (N/100mm)</th>
<th>Min. Bend Radius (mm)</th>
<th>Range of Temperature (°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>12.0</td>
<td>120</td>
<td>600</td>
<td>200</td>
<td>300</td>
<td>-20~+40</td>
</tr>
<tr>
<td>24</td>
<td>16.0</td>
<td>178</td>
<td>600</td>
<td>180</td>
<td>300</td>
<td></td>
</tr>
<tr>
<td>36</td>
<td>17.6</td>
<td>200</td>
<td>135</td>
<td>270</td>
<td>300</td>
<td></td>
</tr>
<tr>
<td>48</td>
<td>20.0</td>
<td>247</td>
<td>180</td>
<td>360</td>
<td>300</td>
<td></td>
</tr>
</tbody>
</table>

**Notes:**
1. All the values in the table, which are for reference only, are subject to change without notice.
2. The tensile and crush of the cable are in accordance with simplex cable of 2.0mm outer diameter.
3. The minimum bend radius (static) is 50 when G657 fiber is used.

**Options**
- **Fiber Type:** G653, G655 or G657 single-mode fiber, A1a or A1b multimode fiber, or other types of fiber.
- **Fiber Count:** Total number of fibers in the cable.
- **Jacket Material:** Environmental flame retardant polyvinyl chloride (PVC), environmental low smoke zero halogen flame retardant polyethylene (LSZH), environmental thermoplastic polyurethane (TPU), or other contracted material.
- **Jacket Color:** Including color of fiber meets the requirements of relevant standards, or other contracted color.
- **Cable Dimension:** The nominal diameter, or other contracted;
- **Delivery Length:** 1km or 2km, or other contracted length.
- **Other Requirements:** Other contracted special requirements.

---

**Bow-type Drop Cable**

- **Applications**
  - Used as access building cable.
  - Used in indoor cabling, especially used for FTTH.

- **Features**
  - Good mechanical and environmental characteristics.
  - Flame retardant characteristics meet the requirements of relevant standards.
  - The mechanical characteristics of jacket meet the requirements of relevant standards.
  - Soft, flexible, easy to lay and splice, and with big capacity data transmission.
  - Meet various requirements of market and clients.

- **Cable Parameters**

<table>
<thead>
<tr>
<th>Fiber Count</th>
<th>Cable Diameter (mm)</th>
<th>Cable Weight (kg/km)</th>
<th>Tensile (N)</th>
<th>Crush (N/100mm)</th>
<th>Min. Bend Radius (mm)</th>
<th>Range of Temperature (°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2.0*1.6</td>
<td>4.8</td>
<td>40/100</td>
<td>200</td>
<td>400</td>
<td>-40~+70</td>
</tr>
<tr>
<td>1-4</td>
<td>3.3*2.0</td>
<td>9.0</td>
<td>40/100</td>
<td>200</td>
<td>400</td>
<td></td>
</tr>
</tbody>
</table>

**Notes:**
1. All the values in the table, which are for reference only, are subject to change without notice.
2. The tensile and crush of the cable are in accordance with the values in the table when the strength member of FRP and Steel are used.
3. The minimum bend radius (static) is 15mm when G657 fiber is used.

**Options**
- **Fiber Type:** G652, G655 or G657 single-mode fiber, A1a or A1b multimode fiber, or other types of fiber.
- **Jacket Material:** Environmental low smoke zero halogen flame retardant polyethylene (LSZH), or other contracted material.
- **Jacket Color:** Including color of fiber meets the requirements of relevant standards, or other contracted color.
- **Cable Dimension:** The nominal cabledimension, or other contracted dimension;
- **Delivery Length:** 1km or 2km, or other contracted length.
- **Other Requirements:** Other contracted special requirements.
**Self-supporting Bow-type Drop Cable**

**Profile View >>**

- Colored Coating Fiber
- Strength Member (FRP/Steel)
- Self-supporting Bow-type Drop Cable
- Self-supporting Strength Member (Steel)
- Jacket

**Applications >>**

Used as access cable from outdoor to indoor in customer premises network; Used as building cable in premises distribution system, especially used in indoor or outdoor aerial access cabling.

**Features >>**

- Good mechanical and environmental characteristics:
- Flame retardant characteristics meet the requirements of relevant standards;
- The mechanical characteristics of jacket meet the requirements of relevant standards;
- Soft, flexible, easy to lay and splice, and with big capacity data transmission;
- Meet various requirements of market and clients.

**Cable Parameters >>**

<table>
<thead>
<tr>
<th>Fiber Count</th>
<th>Cable Dimension (mm)</th>
<th>Cable Weight (kg/km)</th>
<th>Tensile(N)</th>
<th>Crush (N/100mm)</th>
<th>Min Band Radius (mm)</th>
<th>Range of Temperature (°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-4</td>
<td>5.2x2.0</td>
<td>18</td>
<td>300</td>
<td>1000</td>
<td>60</td>
<td>-40 to 70</td>
</tr>
</tbody>
</table>

Note: 1. All the values in the table, which are for reference only, are subject to change without notice; 2. The minimum band radius is 15mm when G657 fiber is used.

**Options >>**

- Fiber Type: G652, G655 or G657 single-mode fiber, A1a or A1b multimode fiber, or other types of fiber;
- Jacket Material: Environmental low smoke zero halogen flame retardant polyolefin (LSZH), or other contracted material;
- Jacket Color: (including color of fiber) meets the requirements of relevant standards, or other contracted color;
- Cable Dimension: The nominal cable dimension, or other contracted dimension;
- Delivery Length: 1km or 2km, or other contracted length;
- Other Requirements: Other contracted special requests.

---

**Round-type Drop Cable I**

**Profile View >>**

- Tight-buffed Fiber
- Strength Member
- Jacket

**Applications >>**

Used as access building cable; Used in indoor cabling, especially used for FTTH.

**Features >>**

- Good mechanical and environmental characteristics:
- Flame retardant characteristics meet the requirements of relevant standards;
- The mechanical characteristics of jacket meet the requirements of relevant standards;
- Soft, flexible, easy to lay and splice, and with big capacity data transmission;
- Meet various requirements of market and clients.

**Cable Parameters >>**

<table>
<thead>
<tr>
<th>Fiber Count</th>
<th>Cable Dimension (mm)</th>
<th>Cable Weight (kg/km)</th>
<th>Tensile(N)</th>
<th>Crush (N/100mm)</th>
<th>Min Band Radius (mm)</th>
<th>Range of Temperature (°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2.5</td>
<td>100</td>
<td>200</td>
<td>2000</td>
<td>80</td>
<td>-20 to 70</td>
</tr>
</tbody>
</table>

Note: 1. All the values in the table, which are for reference only, are subject to change without notice; 2. The minimum band radius is 15mm when G657 fiber is used.

**Options >>**

- Fiber Type: G652, G655 or G657 single-mode fiber, A1a or A1b multimode fiber, or other types of fiber;
- Jacket Material: Environmental low smoke zero halogen flame retardant polyolefin (LSZH), or other contracted material;
- Jacket Color: (including color of fiber) meets the requirements of relevant standards, or other contracted color;
- Cable Dimension: The nominal cable dimension, or other contracted dimension;
- Delivery Length: 1km or 2km, or other contracted length;
- Other Requirements: Other contracted special requests.
**Round-type Drop Cable II**

**Profile View**

- Tight-buffered Fiber
- Water Swellable Yarn
- Central Tube
- Strength Member
- Rigcord
- Jacket

**Applications**

- Used as access building cable;
- Used in indoor cabling, especially used for FTTH.

**Features**

- Good mechanical and environmental characteristics;
- Flame retardant characteristics meet the requirements of relevant standards;
- The mechanical characteristics of jacket meet the requirements of relevant standards;
- Soft, flexible, easy to lay and splice, and with big capacity data transmission;
- Meet various requirements of market and clients.

<table>
<thead>
<tr>
<th>Cable Parameters</th>
<th>Fiber Count</th>
<th>Cable Dimension (mm)</th>
<th>Cable Weight (kg/km)</th>
<th>Tensile (N)</th>
<th>Crush (N/100mm²)</th>
<th>Min. Bend Radius (mm)</th>
<th>Range of Temperature (°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Long-term</td>
<td>Short-term</td>
<td>Long-term</td>
<td>Short-term</td>
<td>Long-term</td>
<td>Short-term</td>
</tr>
<tr>
<td>1</td>
<td>5.1</td>
<td>25</td>
<td>500</td>
<td>1000</td>
<td>500</td>
<td>1000</td>
<td>200</td>
</tr>
</tbody>
</table>

**Options**

- Fiber Type: G652, G655 or G657 single-mode fiber; A1a or A1b multimode fiber, or other types of fiber;
- Jacket Material: Environmental low smoke zero halogen flame retardant polyolefin (LSZH) or other contracted material;
- Jacket Color: (including color of fiber) meets the requirements of relevant standards, or other contracted color;
- Cable Dimension: The nominal cable dimension, or other contracted dimension;
- Delivery Length: 1km or 2km, or other contracted length;
- Other Requirements: Other contracted special requests.

**Self-supporting Round-type Drop Cable**

**Profile View**

- Self-supporting Strength Member (Steel)
- Tight buffered Fiber
- Strength Member
- Jacket

**Applications**

- Used in access network or as access cable from outdoor to indoor in customer premises network;
- Used as access building cable in premises distribution system, especially used in indoor or outdoor aerial cabling.

**Features**

- Good mechanical and environmental characteristics;
- Flame retardant characteristics meet the requirements of relevant standards;
- The mechanical characteristics of jacket meet the requirements of relevant standards;
- Soft, flexible, easy to lay and splice, and with big capacity data transmission;
- Meet various requirements of market and clients.

<table>
<thead>
<tr>
<th>Cable Parameters</th>
<th>Fiber Count</th>
<th>Cable Dimension (mm)</th>
<th>Cable Weight (kg/km)</th>
<th>Tensile (N)</th>
<th>Crush (N/100mm²)</th>
<th>Min. Bend Radius (mm)</th>
<th>Range of Temperature (°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Long-term</td>
<td>Short-term</td>
<td>Long-term</td>
<td>Short-term</td>
<td>Long-term</td>
<td>Short-term</td>
</tr>
<tr>
<td>1</td>
<td>5.3:3.0</td>
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<td>300</td>
<td>600</td>
<td>200</td>
<td>1000</td>
<td>60</td>
</tr>
</tbody>
</table>

**Options**

- Fiber Type: G652, G655 or G657 single-mode fiber; A1a or A1b multimode fiber, or other types of fiber;
- Jacket Material: Environmental low smoke zero halogen flame retardant polyolefin (LSZH) or other contracted material;
- Jacket Color: (including color of fiber) meets the requirements of relevant standards, or other contracted color;
- Cable Dimension: The nominal cable dimension, or other contracted dimension;
- Delivery Length: 1km or 2km, or other contracted length;
- Other Requirements: Other contracted special requests.
**Duplex Round Base Station Cable I**

**Applications**
Mainly used in wireless base station (BS) horizontal and vertical cabling.

**Features**
- Good mechanical and environmental characteristics;
- Flame retardant characteristics meet the requirements of relevant standards;
- The mechanical characteristics of jacket meet the requirements of relevant standards;
- Soft, flexible, easy to lay and splice, and with big capacity data transmission;
- Meet various requirements of market and clients.

**Cable Parameters**

<table>
<thead>
<tr>
<th>Fiber Count</th>
<th>2</th>
<th>7.0</th>
<th>42.0</th>
<th>200</th>
<th>400</th>
<th>1100</th>
<th>2200</th>
<th>2CD</th>
<th>100</th>
<th>-40~+80</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>7.0</td>
<td>42.0</td>
<td>200</td>
<td>400</td>
<td>1100</td>
<td>2200</td>
<td>2CD</td>
<td>100</td>
<td>-40~+80</td>
</tr>
</tbody>
</table>

**Options**
- Fiber Type: G652, G655 or G667 single-mode fiber, A1a or A1b multimode fiber, or other types of fiber;
- Jacket Material: Environmental low smoke zero halogen flame retardant polyolefin (LSZH), or other contracted material;
- Cable Dimension: The nominal cable dimension, or other contracted dimension;
- Delivery Length: 1km or 2km, or other contracted length;
- Other Requirements: Other contracted special requests.

---

**Duplex Round Base Station Cable II**

**Applications**
Mainly used in wireless base station (BS) horizontal and vertical cabling.

**Features**
- Good mechanical and environmental characteristics;
- Flame retardant characteristics meet the requirements of relevant standards;
- The mechanical characteristics of jacket meet the requirements of relevant standards;
- Soft, flexible, easy to lay and splice, and with big capacity data transmission;
- Meet various requirements of market and clients.

**Cable Parameters**

<table>
<thead>
<tr>
<th>Fiber Count</th>
<th>7</th>
<th>6.8</th>
<th>24</th>
<th>300</th>
<th>450</th>
<th>1600</th>
<th>3000</th>
<th>2CD</th>
<th>100</th>
<th>-40~+80</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>7</td>
<td>6.8</td>
<td>24</td>
<td>300</td>
<td>450</td>
<td>1600</td>
<td>3000</td>
<td>2CD</td>
<td>100</td>
<td>-40~+80</td>
</tr>
</tbody>
</table>

**Options**
- Fiber Type: G652, G655 or G667 single-mode fiber, A1a or A1b multimode fiber, or other types of fiber;
- Jacket Material: Environmental low smoke zero halogen flame retardant polyolefin (LSZH), environmental thermoplastic polyurethane (TPU), or other contracted material;
- Cable Dimension: The nominal cable dimension, or other contracted dimension;
- Delivery Length: 1km or 2km, or other contracted length;
- Other Requirements: Other contracted special requests.
Duplex Round Base Station Cable III

Applications >>
Mainly used in wireless base station (BS) horizontal and vertical cabling.

Features >>
Good mechanical and environmental characteristics;
Fibers in the cable meet the requirements of relevant standards;
The mechanical characteristics of jacket meet the requirements of relevant standards;
Soft, flexible, easy to lay and splice, and with big capacity data transmission;
Meet various requirements of market and clients.

Cable Parameters >>

<table>
<thead>
<tr>
<th>Fiber Count</th>
<th>Cable Dimension (mm)</th>
<th>Cable Weight (kg/km)</th>
<th>Tensile (N)</th>
<th>Crush (mm)</th>
<th>Min. Bend Radius (mm)</th>
<th>Range of Temperature (°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Long Term</td>
<td>Short Term</td>
<td>Long Term</td>
<td>Short Term</td>
</tr>
<tr>
<td>2</td>
<td>5.0</td>
<td>40</td>
<td>300</td>
<td>460</td>
<td>1500</td>
<td>3000</td>
</tr>
</tbody>
</table>

Note: 1. All the values in the table, which are for reference only, are subject to change without notice;
2. D is outer diameter of the round cable;
3. The minimum bending radius (static) is 5D when G657 fiber is used.

Options >>
Fiber Type: G652, G655 or G657 single-mode fiber, A1a or A1b multimode fiber, or other types of fiber;
Jacket Material: Environmental low smoke zero halogen flame retardant polyolefin (LSZH), environmental thermoplastic polyurethane (TPU), or other contracted material;
Jacket Color: Including color of fiber meets the requirements of relevant standards, or other contracted color;
Cable Dimension: The nominal cable dimension, or other contracted dimension;
Delivery Length: 1km or 2km, or other contracted length;
Other Requirements: Other contracted special request.

Multi-fiber Round Base Station Cable I

Applications >>
Mainly used in wireless base station (BS) horizontal and vertical cabling.

Features >>
Good mechanical and environmental characteristics;
The fibers in the cable meet the requirements of relevant standards;
The mechanical characteristics of jacket meet the requirements of relevant standards;
Soft, flexible, easy to lay and splice, and with big capacity data transmission;
Meet various requirements of market and clients.

Cable Parameters >>

<table>
<thead>
<tr>
<th>Fiber Count</th>
<th>Cable Dimension (mm)</th>
<th>Cable Weight (kg/km)</th>
<th>Tensile (N)</th>
<th>Crush (mm)</th>
<th>Min. Bend Radius (mm)</th>
<th>Range of Temperature (°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Long Term</td>
<td>Short Term</td>
<td>Long Term</td>
<td>Short Term</td>
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<td>4</td>
<td>5.0</td>
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<td>450</td>
<td>1000</td>
<td>3000</td>
</tr>
<tr>
<td>6</td>
<td>5.9</td>
<td>33</td>
<td>300</td>
<td>450</td>
<td>1000</td>
<td>3000</td>
</tr>
<tr>
<td>8</td>
<td>6.2</td>
<td>36</td>
<td>300</td>
<td>450</td>
<td>1000</td>
<td>3000</td>
</tr>
<tr>
<td>12</td>
<td>6.8</td>
<td>42</td>
<td>300</td>
<td>450</td>
<td>1000</td>
<td>3000</td>
</tr>
<tr>
<td>16</td>
<td>7.5</td>
<td>48</td>
<td>300</td>
<td>450</td>
<td>1000</td>
<td>3000</td>
</tr>
<tr>
<td>18</td>
<td>7.5</td>
<td>50</td>
<td>300</td>
<td>450</td>
<td>1000</td>
<td>3000</td>
</tr>
<tr>
<td>24</td>
<td>8.2</td>
<td>57</td>
<td>300</td>
<td>450</td>
<td>1000</td>
<td>3000</td>
</tr>
</tbody>
</table>

Note: 1. All the values provided in the table, which are for reference only, are subject to change without notice;
2. The cable dimension and weight are in accordance with tight-buffered fiber of 0.9mm outer diameter;
3. D is outer diameter of the round cable;
4. The minimum bending radius (static) is 5D when G.657 fiber is used.

Options >>
Fiber Type: G652, G655 or G657 single-mode fiber, A1a or A1b multimode fiber, or other types of fiber;
Fiber Count: Total number of fibers in the cable;
Jacket Material: Environmental low smoke zero halogen flame retardant polyolefin (LSZH), environmental thermoplastic polyurethane (TPU), or other contracted material;
Jacket Color: Including color of fiber meets the requirements of relevant standards, or other contracted color;
Cable Dimension: The nominal diameter, or other contracted diameter;
Delivery Length: 1km or 2km, or other contracted length;
Other Requirements: Other contracted special request.
Multi-fiber Round Base Station Cable II

Applications
Mainly used in wireless base station (BS) horizontal and vertical cabling.

Features
Good mechanical and environmental characteristics;
The mechanical characteristics meet the requirements of relevant standards;
Soft, flexible, easy to splice, and with big capacity data transmission;
Meet various requirements of market and clients.

Cable Parameters
<table>
<thead>
<tr>
<th>Fiber Count</th>
<th>Cable Dimension (mm)</th>
<th>Cable Weight (kg/km)</th>
<th>Tensile (N) Long Term</th>
<th>Tensile (N) Short Term</th>
<th>Crush (N/100mm) Long Term</th>
<th>Crush (N/100mm) Short Term</th>
<th>Min. Bend Radius (mm)</th>
<th>Range of Temperature (°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>5.2</td>
<td>50</td>
<td>300</td>
<td>450</td>
<td>1000</td>
<td>3000</td>
<td>20D</td>
<td>-40~80</td>
</tr>
<tr>
<td>6</td>
<td>5.5</td>
<td>60</td>
<td>310</td>
<td>450</td>
<td>1000</td>
<td>3000</td>
<td>20D</td>
<td>-40~80</td>
</tr>
<tr>
<td>8</td>
<td>6.0</td>
<td>60</td>
<td>310</td>
<td>450</td>
<td>1000</td>
<td>3000</td>
<td>20D</td>
<td>-40~80</td>
</tr>
<tr>
<td>12</td>
<td>6.5</td>
<td>60</td>
<td>380</td>
<td>450</td>
<td>1000</td>
<td>3000</td>
<td>20D</td>
<td>-40~80</td>
</tr>
<tr>
<td>16</td>
<td>7.0</td>
<td>60</td>
<td>400</td>
<td>450</td>
<td>1000</td>
<td>3000</td>
<td>20D</td>
<td>-40~80</td>
</tr>
<tr>
<td>18</td>
<td>7.0</td>
<td>60</td>
<td>400</td>
<td>450</td>
<td>1000</td>
<td>3000</td>
<td>20D</td>
<td>-40~80</td>
</tr>
<tr>
<td>24</td>
<td>7.0</td>
<td>60</td>
<td>410</td>
<td>450</td>
<td>1000</td>
<td>3000</td>
<td>20D</td>
<td>-40~80</td>
</tr>
</tbody>
</table>

Note: 1. All the values provided in the table, which are for your reference, are subject to change without notice.
2. The cable dimension and weight are in accordance with tight-buffered fiber of 0.9mm outer diameter.
3. D is outer diameter of the round cable.
4. The minimum bend radius (static) is 5D when G.657 fiber is used.

Options
Fiber Type: G652, G655 or G657 single-mode fiber, A1a or A1b multi-mode fiber, or other types of fiber;
Fiber Count: Total number of fibers in the cable;
Jacket Material: Environmental low smoke zero halogen flame retardant polyethylene (LSZH), environmental thermoplastic polyethylene (TPU), or other contracted material;
Jacket Color: (including color of fiber) meets the requirements of relevant standards, or other contracted color;
Cable Dimension: The nominal diameter, or other contracted dimension;
Delivery Length: 1km or 2km, or other contracted length;
Other Requirements: Other contracted special requirements.

Spiral Armored Cable I

Applications
It is mainly used for indoor horizontal and vertical wiring, or terminal optical component connection (jumper).
Used in optical connections in optical communication equipment rooms and optical distribution frames.

Features
It has good mechanical and environmental properties, excellent crush resistance, rodent meshing resistance and torsional resistance;
The flame retardant (or non-flame retardant) performance of the sheath meets the requirements of the standard.
The mechanical characteristics meet the requirements of relevant standards;
Soft, flexible, easy to splice, and with big capacity data transmission;
Meet various requirements of market and clients.

Cable Parameters
<table>
<thead>
<tr>
<th>Fiber Count</th>
<th>Cable Dimension (mm)</th>
<th>Cable Weight (kg/km)</th>
<th>Tensile (N) Long Term</th>
<th>Tensile (N) Short Term</th>
<th>Crush (N/100mm) Long Term</th>
<th>Crush (N/100mm) Short Term</th>
<th>Min. Bend Radius (mm)</th>
<th>Range of Temperature (°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2.0</td>
<td>8.0</td>
<td>40</td>
<td>80</td>
<td>1000</td>
<td>2000</td>
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<td>-60~60</td>
</tr>
<tr>
<td>2</td>
<td>2.5</td>
<td>10.0</td>
<td>40</td>
<td>80</td>
<td>1000</td>
<td>2000</td>
<td>60</td>
<td>-60~60</td>
</tr>
<tr>
<td>3</td>
<td>3.0</td>
<td>15.5</td>
<td>60</td>
<td>150</td>
<td>1000</td>
<td>3000</td>
<td>60</td>
<td>-60~60</td>
</tr>
<tr>
<td>4</td>
<td>3.2</td>
<td>16.5</td>
<td>60</td>
<td>150</td>
<td>1000</td>
<td>3000</td>
<td>60</td>
<td>-60~60</td>
</tr>
</tbody>
</table>

Note: 1. All the values in the table, which are for reference only, are subject to change without notice.
2. The minimum bend radius (static) is 15mm when G.657 fiber is used.

Options
Fiber Type: G652, G655 or G657 single-mode fiber, A1a or A1b multi-mode cable, or other types of fiber;
Jacket Material: Environmental flame-retardant polyvinyl chloride (PVC), environmental low smoke zero halogen flame retardant polyethylene (LSZH), environmental thermoplastic polyurethane (TPU), or other contracted material;
Jacket Color: (including color of fiber) meets the requirements of relevant standards, or other contracted color;
Cable Dimension: The nominal cable dimension, or other contracted dimension;
Delivery Length: 1km or 2km, or other contracted length;
Other Requirements: Other contracted special requests.
**Spiral Armored Cable II**

**Applications**
- It is mainly used for indoor horizontal and vertical wiring, or terminal optical component connection (jumper);
- Used in optical connections in optical communication equipment rooms and optical distribution frames;
- Used in optical connections in optical apparatus and equipment.

**Features**
- It has good mechanical and environmental properties, excellent crush resistance, rodent meshing resistance and tensile resistance;
- The flame retardant (or non-flame retardant) performance of the sheath meets the requirements of the standard.
- The mechanical characteristics meet the requirements of relevant standards;
- Soft, flexible, easy to splice, and with big capacity data transmission;
- Meet various requirements of market and clients.

**Cable Parameters**

<table>
<thead>
<tr>
<th>Fiber Count</th>
<th>Cable Dimension (mm)</th>
<th>Cable Weight (kg/km)</th>
<th>Tensile (N)</th>
<th>Crush (N/mm²)</th>
<th>Min. Bend Radius (mm)</th>
<th>Range of Temperature (℃)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2.5</td>
<td>11.0</td>
<td>80</td>
<td>150</td>
<td>1000</td>
<td>3000</td>
</tr>
<tr>
<td>2</td>
<td>3.2</td>
<td>18.0</td>
<td>80</td>
<td>150</td>
<td>1000</td>
<td>3000</td>
</tr>
</tbody>
</table>

Note: 1. All the values in the table, which are for reference only, are subject to change without notice.
2. The minimum bend radius (static) is 15mm when 6657 fiber is used.

**Options**
- Fiber Type: G652, G655 or G657 single-mode fiber, A1a or A1b multimode cable, or other types of fiber;
- Jacket Material: Environmental flame-retardant polyvinyl chloride (PVC), environmental low smoke zero halogen flame retardant polyethylene (LSZH), environmental thermoplastic polyurethane (TPU), or other contracted material;
- Jacket Color: (including color of fiber) meets the requirements of relevant standards, or other contracted color;
- Cable Dimension: The nominal cable dimension, or other contracted dimension;
- Delivery Length: 1km or 2km, or other contracted length;
- Other Requirements: Other contracted special requirements.

---

**Date Center Cable I**

**Applications**
- Used in data center cabling;
- Used in interconnect lines of equipments, and used in optical connections in optical communication equipment rooms and distribution frames;
- Used in patchpats and patch cords.

**Features**
- Good mechanical and environmental characteristics;
- Flame retardant characteristics meet the requirements of relevant standards;
- The mechanical characteristics meet the requirements of relevant standards;
- Soft, flexible, easy to splice, and with big capacity data transmission;
- Meet various requirements of market and clients.

**Cable Parameters**

<table>
<thead>
<tr>
<th>Fiber Count</th>
<th>Cable Dimension (mm)</th>
<th>Cable Weight (kg/km)</th>
<th>Tensile (N)</th>
<th>Crush (N/mm²)</th>
<th>Min. Bend Radius (mm)</th>
<th>Range of Temperature (℃)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>3.0</td>
<td>7.0</td>
<td>80</td>
<td>150</td>
<td>1000</td>
<td>3000</td>
</tr>
<tr>
<td>12</td>
<td>3.0</td>
<td>7.0</td>
<td>80</td>
<td>150</td>
<td>1000</td>
<td>3000</td>
</tr>
<tr>
<td>24</td>
<td>3.0</td>
<td>7.0</td>
<td>80</td>
<td>150</td>
<td>1000</td>
<td>3000</td>
</tr>
</tbody>
</table>

Note: 1. All the values in the table, which are for reference only, are subject to change without notice.
2. The minimum bend radius (static) is 15mm when G652 fiber is used.

**Options**
- Fiber Type: G652, G655 or G657 single-mode fiber, A1a or A1b multimode fiber, or other types of fiber;
- Fiber Count: Total number of fibers in the cable;
- Jacket Material: Environmental flame-retardant polyvinyl chloride (PVC), environmental low smoke zero halogen flame retardant polyethylene (LSZH), environmental thermoplastic polyurethane (TPU), or other contracted material;
- Jacket Color: (including color of fiber) meets the requirements of relevant standards, or other contracted color;
- Cable Dimension: The nominal diameter, or other contracted;
- Delivery Length: 1km or 2km, or other contracted length;
- Other Requirements: Other contracted special requirements.
### Date Center Cable II

**Profile View**

- Colored Coating Fiber
- Strength Member
- Inner Jacket
- Strength Member
- Outer Jacket

**Applications**

- Used in data center cabling
- Used as interconnect lines of equipments, and used in optical connections in optical communication equipment rooms and distribution frames;
- Used in pigtailed and patch cords.

**Features**

- Good mechanical and environmental characteristics;
- Flame retardant characteristics meet the requirements of relevant standards;
- The mechanical characteristics meet the requirements of relevant standards;
- Soft, flexible, easy to splice, and with big capacity data transmission;
- Meet various requirements of market and clients.

**Cable Parameters**

<table>
<thead>
<tr>
<th>Fiber Count</th>
<th>Cable Diameter (mm)</th>
<th>Cable Weight (kg/km)</th>
<th>Tension (N)</th>
<th>Crush (N/100mm)</th>
<th>Min. Bend Radius (mm)</th>
<th>Range of Temperature (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>6.5</td>
<td>16.5</td>
<td>200</td>
<td>440</td>
<td>200</td>
<td>1000</td>
</tr>
<tr>
<td>12</td>
<td>6.5</td>
<td>16.5</td>
<td>200</td>
<td>440</td>
<td>250</td>
<td>1000</td>
</tr>
<tr>
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<td>5.0</td>
<td>23.5</td>
<td>200</td>
<td>440</td>
<td>200</td>
<td>1000</td>
</tr>
</tbody>
</table>

Note: All the values in the table, which are for reference only, are subject to change without notice.

**Options**

- Fiber Type: G652, G655 or G657 single-mode fiber, A1a or A1b multimode fiber, or other types of fiber;
- Fiber Count: Total number of fibers in the cable;
- Jacket Material: Environmental flame-retardant polyvinyl chloride (PVC), environmental low smoke zero halogen flame retardant polyolefin (LSZH), environmental thermoplastic polyurethane (TPU), or other contracted material;
- Cable Color: (including color of fiber) meets the requirements of relevant standards, or other contracted color;
- Min. Bend Radius: The nominal diameter, or other contracted;
- Delivery Length: 1km or 2km, or other contracted length;
- Other Requirements: Other contracted special requirements.

### Date Center Cable III

**Profile View**

- Cable Subunit
- Central Strength Member
- Tape
- Strength Member
- Outer Jacket

**Applications**

- Used in data center cabling
- Used as interconnect lines of equipments, and used in optical connections in optical communication equipment rooms and distribution frames;
- Used in pigtailed and patch cords.

**Features**

- Good mechanical and environmental characteristics;
- Flame retardant characteristics meet the requirements of relevant standards;
- The mechanical characteristics meet the requirements of relevant standards;
- Soft, flexible, easy to splice, and with big capacity data transmission;
- Meet various requirements of market and clients.

**Cable Parameters**

<table>
<thead>
<tr>
<th>Fiber Count</th>
<th>Cable Dimension (mm)</th>
<th>Cable Weight (kg/km)</th>
<th>Tension (N)</th>
<th>Crush (N/100mm)</th>
<th>Min. Bend Radius (mm)</th>
<th>Range of Temperature (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>32</td>
<td>9.8</td>
<td>75.0</td>
<td>300</td>
<td>600</td>
<td>300</td>
<td>1000</td>
</tr>
<tr>
<td>48</td>
<td>9.8</td>
<td>75.0</td>
<td>300</td>
<td>600</td>
<td>300</td>
<td>1000</td>
</tr>
<tr>
<td>72</td>
<td>13.0</td>
<td>107.0</td>
<td>400</td>
<td>800</td>
<td>300</td>
<td>1000</td>
</tr>
<tr>
<td>114</td>
<td>17.5</td>
<td>148.0</td>
<td>500</td>
<td>1000</td>
<td>300</td>
<td>1000</td>
</tr>
</tbody>
</table>

Note: All the values in the table, which are for reference only, are subject to change without notice.

**Options**

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SHI JIA PHOTONS – Cable Assemblies

MPO/MTP® Patchcord
- Description
  - Description
  - Configuration
    - MPO/MTP®-MPO/MTP® Type A
    - MPO/MTP®-MPO/MTP® Type B
    - MPO/MTP®-MPO/MTP® Type C
    - Male or Female
    - 5MM/5MM/OM3/OM4

MPO/MTP® Fanout
- Description
  - Description
  - Configuration
    - MPO/MTP®-12xLC
    - MPO/MTP®-6xLC
    - MPO/MTP®-24xLC
    - MPO/MTP®-12xLC
    - MPO/MTP®-SC/FC/FC/2000

MPO/MTP® Harness
- Description
  - Description
  - Configuration
    - MPO/MTP®-LC-SC
    - MPO/MTP®-LC-SC
    - MPO/MTP®-LC-SC
    - MPO/MTP®-LC-SC
MT Series-AOC Patchcord

Feature
Compact size
Customized package
Various fiber length available
Various ferrule brand available

MT Series-MT-FA

Feature
Changes optical signal to RP transfer
Compact size
High reliable

Free Space Isolator

Feature
High isolation
High reliable
Low insertion loss
Compact size
Various package type
Wide operation temperature range

Inspector and Cleaning Tools

Easy Gel WiFi Wireless Fiber End-face Inspector

Feature
Transfer fiber end-face image to various display terminal
One-hand operation
WiFi mode and USB mode are both available
Compatible with Windows, Android, iOS system
Battery duration up to 3 hours

1.25MM Fiber End-face Cleaner

Feature
Enable to clean 1.25mm ferrule such as LC, MU

MPO Fiber End-face Cleaner

Feature
Effective on a variety of contaminants
Capable of cleaning MPO ferrules and MPO adapter
Easy one-hand operation
Up to 900 cleaning

Cleaner Cassette

Feature
Removing dirt without scratching the end

2.5mm Fiber End-face Cleaner

Feature
Available for clean 2.5mm ferrule, such as FC, SC, ST
Over 1000 times cleaning
Anti-static, no secondary pollutions
Easy to operate
High cleanliness

1.25mm Fiber End-face Cleaner

Feature
Removing dirt without scratching the end